NRROS Protein, Human (Baculovirus, His-Myc)

Cat. No.:	HY-P72063
Synonyms:	NRROS; LRRC33; UNQ3030/PRO9833Transforming growth factor beta activator LRRC33; Leucine-rich repeat-containing protein 33; Negative regulator of reactive oxygen species
Species:	Human
Source:	Sf9 insect cells
Accession:	Q86YC3 (W19-L650)
Gene ID:	375387
Molecular Weight:	Approximately 73.5 kDa

PROPERTIES

AA Sequence	W R N R S G T A T A A S Q G V C K L V G G A A D C R G Q S L A S V P S S L P P H A R M L T L D A N P L K T L W N H S L Q P Y P L L E S L S L H S C H L E R I S R G A F Q E Q G H L R S L V L G D N C L S E N Y E E T A A A L H A L P G L R R L D L S G N A L T E D M A A L M L Q N L S S L R S V S L A G N T I M R L D D S V F E G L E R L R E L D L Q R N Y I F E I E G G A F D G L A E L R H L N L A F N N L P C I V D F G L T R L R V L N V S Y N V L E W F L A T G G E A A F E L E T L D L S H N Q L L F F P L L P Q Y S K L R T L L L R D N N M G F Y R D L Y N T S S P R E M V A Q F L L V D G N V T N I T T V S L W E E F S S S D L A D L R F L D M S Q N Q F Q Y L P D G F L R K M P S L S H L N L H Q N C L M T L H I R E H E P P G A L T E L D L S H N Q L S E L H L A P G L A S C L G S L R L F N L S S N Q L L G V P P G L F A N A R N I T T L D M S H N Q I S L C P L P A A S D R V G P P S C V D F R N M A S L R S L S L E G C G L G A L P D C P F Q G T S L T Y L D L S S N W G V L N G S L A P L Q D V A P M L Q V L S L R N M G L H S S F M A L D F S G F G N L R D L D L S G N C L T T F P R F G G S L A L E T L D L R R N S L T A L P Q K A V S E Q L S R G L R T I Y L S Q N P Y D C C G V D G W G A L Q H G Q T V A D W A M V T C N L S S K I I R V T E L P G G V P R D C K W E R L D L G L
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm sterile filtered PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	NRROS, a key regulator of transforming growth factor beta-1 (TGFB1), plays a crucial role in microglia function within the nervous system. Its specific requirement for microglial activity involves the activation of latent TGFB1 in macrophages and microglia, accomplished by forming disulfide bonds with the Latency-associated peptide (LAP), the regulatory chain of TGFB1. NRROS orchestrates integrin-dependent activation of TGFB1, leading to highly localized TGF-beta-1 activation with limited spread to neighboring microglia. This localized and selective activation mechanism suggests the precision of LRRC33/NRROS in modulating TGFB1 signaling. Moreover, NRROS indirectly participates in Toll-like receptor (TLR) signaling, inhibiting TLR-mediated NF-kappa-B activation and cytokine production, possibly as a consequence of its role in TGF-beta-1 signaling. NRROS interacts with TGFB1 through disulfide bonds with LAP and engages with TLR2, TLR3, TLR4, TLR9, and potentially other Toll-like receptors, further emphasizing its multifaceted involvement in immune regulation. Additionally, NRROS directly interacts with CYBB/NOX2, highlighting its diverse functional associations.

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